

Below are the Connecticut Standards of Learning in Math, Technology, Social Studies, and Science and arranged by competency area and Grade. The Standards are checked (✓) to identify the extent to which TRAC PAC 2 modules relate to the Connecticut Standards.

Grade 6

✓	✓	✓			✓	✓	✓				Identify three types of businesses.
		✓			✓	✓	✓				Describe free enterprise.
		✓			✓	✓	✓				Analyze a product for its ability to satisfy consumer demands.
		✓			✓	✓	✓				Develop skills in making wise consumer decisions.
		✓			✓	✓	✓				Discuss the global market/ economy and understand its effects on the United States.

TECH ED - Grades 5-8 - Technological Impact

Students will understand the impact that technology has on the social, cultural and environmental aspects of their lives.

✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explain how technology has expected and unexpected effects.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explore personal, societal, economic and environmental effects of technological systems.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Trace the historical development of at least one technology, identifying its effects and hypothesizing about its future.
✓	✓		✓			✓	✓	✓	✓	✓	✓	Identify the social and economic impacts of automation and computer-controlled processing.
												Describe the universal input, process, output, feedback (IPOF) systems model.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Develop criteria for evaluating technology.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Identify and describe how individual technological innovations may be combined to create new technologies.

TECH ED - Grades 5-8 - Career Awareness

Students will become aware of the world of work and its function in society, diversity, expectations, trends and requirements.

✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Describe how technological development affects careers and occupations.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Demonstrate awareness of changes in job requirements over time.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Describe strategies for assuming responsibility.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Develop personal responsibility and accountability in the workplace.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Define and discuss personal and professional ethics.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Discuss coping strategies for change.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Identify expectations in the workplace.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Define and discuss the concept of "work ethic."
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explore career options.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Define and discuss "career path."

TECH ED - Grades 5-8 - Problem Solving/Research & Development

Students will recognize technology as the result of a creative act, and will be able to apply disciplined problem-solving strategies to enhance invention and innovation.

✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Differentiate between human problems and needs.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Define decision-making, research and invention.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Discuss how technological systems have been used to solve human problems.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Select and apply a general problem-solving model in a laboratory setting.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Identify research methods, materials and techniques.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Apply cooperative techniques while engaged in group problem-solving activities.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Engage in an activity that requires creativity.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Describe and apply the processes used to make decisions.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Apply appropriate and effective questioning techniques.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Conduct an applied research project.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Develop, test and modify a design idea through experimentation.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Differentiate between invention and innovation.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Develop a solution for a real-life problem.

TECH ED - Grades 5-8 - Leadership

Students will identify and develop leadership attributes and apply them in team situations.

✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Create a simple flowchart of their daily activities.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Engage in presentation activities.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Identify the elements of interpersonal communication.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Identify and demonstrate organizational skills.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explore different roles while working cooperatively and effectively in team situations.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Demonstrate strategies for effectively managing time.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Develop organizational skills through practical experiences.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explore different roles within a team environment.

TECH ED - Grades 5-8 - Materials and Processes

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Students will know the origins, properties and processing techniques associated with the material building blocks of technology.

✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Identify and describe a group of new and recycled materials used in technological systems.
✓	✓	✓	✓									Differentiate between primary and secondary raw materials.
												Explore methods used to convert raw and recycled materials into usable products.
												Demonstrate the appropriate selection and safe operation of basic hand and power tools.
✓	✓	✓	✓	✓							✓	Use manual and electronic measuring devices accurately.
												Explore the principles of manual material-processing techniques.
												Describe how products are manufactured.
												Demonstrate a working knowledge of the layout, shaping, smoothing, assembly and finishing techniques used to produce a product.
												Explore the principles of computer-controlled processing techniques.
												Produce simple products from a variety of materials, using manual and computer controlled devices.

TECH ED - Grades 5-8 - Communication Systems

Students will understand and be able to effectively apply physical, graphic and electronic communications techniques in processing, transmitting, receiving and organizing information.

✓	✓	✓	✓	✓	✓	✓	✓					Identify and give examples of integrated technologies.
												Identify the elements of interpersonal communication.
												Identify the elements of mass communications.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Acquire technology based information and apply it in classroom and laboratory situations.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explore and explain the integration of communication technologies into transportation and production systems.
✓	✓	✓										Apply techniques of interpersonal and mass communication through activities such as sketching, CAD, photography, and video.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Evaluate and select appropriate methods of communication for a given problem or situation.

TECH ED - Grades 5-8 Production Systems

Students will understand and be able to demonstrate the methods involved in turning raw materials into usable products.

✓	✓	✓	✓									Define manufacturing terminology, including interchange ability, automation, standardization, etc.
												Describe how products are manufactured using the methods of single craftsman, line and mass, and automated-robotics manufacturing.
✓	✓	✓	✓	✓								Identify and describe the tools and methods used in manufacturing products.
												Identify the characteristics of sub- and superstructures.
✓	✓											Identify and describe the tools, materials, and methods used in constructing sub- and superstructures.
✓	✓	✓	✓									Design, construct and test models of shelters and other structures.
												Produce a product using a simple production sequence: layout, shaping, smoothing, assembly, and finishing techniques.

TECH ED - Grades 5-8 - Transportation Systems

Students will understand transportation systems and the environments used to move goods and people, and the subsystems common to each.

✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Differentiate between vehicular and stationary transportation systems.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Differentiate between fixed and random-route land transportation systems.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Describe and be able to identify the trans. subsystems of body/frame, propulsion, suspension, control, guidance and support in a variety of transportation devices.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explore the characteristics of lighter than air and heavier than air atmospheric transportation systems.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Apply the concept of transportation subsystems while solving transportation problems.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Identify and experiment with devices used to protect product and personnel in transportation systems.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explore, build and experiment with model marine, space, land and airpotation systems.

TECH ED - Grades 5-8 - Enterprise

Students will demonstrate the techniques of enterprise and how they relate to product and service production, economics, human and material resources, and technology.

											✓	Describe the evolution of technological enterprise.
											✓	Discuss the influence of enterprise on culture, society, and the environment.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Define the terms single ownership, company, corporation, and partnership.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explore the career possibilities and responsibilities in enterprise.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Identify and explore a variety of organizational structures, describing the advantages and disadvantages of each
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explore market research and its relationship to satisfying consumer needs.
												Develop, distribute and evaluate a customer survey.

TECH ED - Grades 5-8 - Engineering Design

Students will be able to apply the engineering design process to achieve desired outcomes across all technology content areas.

✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Identify the elements of design.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Discuss the differences between problem solving and engineering design strategies.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explain the role of creativity in the engineering design process.

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Design & Construction
Bridge Builder
Environmental
Madley
Motion
Highway Safety
SimCity
Traffic Technology
GPS 101
Gantilever Beam
Jeopardy

✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Describe conceptual design, embodiment design, and detail design and identify their roles in the engineering process.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explore a variety of creativity-enhancing techniques.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Develop conceptual designs for transportation, communications, production and bio-related problems.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Use a variety of creativity-enhancing techniques in conceptual design situations.
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Explore techniques used to refine conceptual design sketches.
✓	✓		✓							Develop preliminary product layouts.